

# LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

## Volume 5 | Technical Appendices

CFA14 | Newton Purcell to Brackley

**Data appendix (AQ-001-014)**

Air quality

November 2013

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Department  
for Transport

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# Contents

|   |           |
|---|-----------|
| <b>Contents</b>                                 | <b>i</b>  |
| <b>1 Introduction</b>                           | <b>1</b>  |
| <b>2 Policy framework</b>                       | <b>2</b>  |
| <b>3 Baseline air quality data</b>              | <b>3</b>  |
| 3.1 Existing air quality                        | 3         |
| 3.2 Receptors                                   | 4         |
| <b>4 Dust impact evaluation and risk rating</b> | <b>5</b>  |
| <b>5 Air quality assessment - road traffic</b>  | <b>10</b> |
| 5.1 Overall assessment approach                 | 10        |
| 5.2 Construction traffic model                  | 10        |
| 5.3 Operational traffic model                   | 14        |
| <b>6 References</b>                             | <b>18</b> |

## List of tables

|  |    |
|--|----|
| Table 1: Evaluation and risk rating of construction activities                     | 5  |
| Table 2: Summary of construction dust impacts and effects                          | 9  |
| Table 3: Modelled receptors (construction phase)                                   | 10 |
| Table 4: Background 2017 concentrations at assessed receptors                      | 11 |
| Table 5: Summary of DMRB annual mean NO <sub>2</sub> results (construction phase)  | 12 |
| Table 6: Summary of DMRB annual mean PM <sub>10</sub> results (construction phase) | 12 |
| Table 7: Modelled receptors (operational phase)                                    | 14 |
| Table 8: Background 2026 concentrations at assessed receptors                      | 14 |
| Table 9: Summary of DMRB annual mean NO <sub>2</sub> results (operational phase)   | 16 |
| Table 10: Summary of DMRB annual mean PM <sub>10</sub> results (operational phase) | 16 |

# 1 Introduction

1.1.1 The air quality appendix for the Newton Purcell to Brackley community forum area (CFA14) comprises:

- discussion of the policy framework (Section 2);
- baseline air quality data (Section 3);
- dust impact evaluation and risk rating (Section 4); and
- air quality assessment - road traffic (Section 5).

1.1.2 Maps referred to throughout the air quality appendix are contained in the Volume 5, Air Quality Map Book.

## 2 Policy framework

- 2.1.1 Policy 41 of the East Midlands Plan<sup>1</sup> aims to encourage plans, programmes and proposals that contribute to reducing air pollution in the region.
- 2.1.2 Policy EN5 of the Cherwell Non-Statutory Local Plan<sup>2</sup> seeks to prevent development that will have an adverse impact on air quality, including that caused by traffic generation and saved Policy ENV1 of the Cherwell Local Plan seeks to prevent development that will cause detrimental levels of air pollution. Aylesbury Vale District Local Plan saved Policies GP.8 and GP.95<sup>3</sup> seek to protect public amenity, preventing development that will unreasonably harm any aspect of the amenity of nearby residents.
- 2.1.3 The submitted version of the West Northamptonshire Joint Core Strategy Policy BN9<sup>4</sup> requires proposals for new development to demonstrate that they provide opportunities to minimise and where reasonably practicable reduce pollution, maintaining or improving air quality in accordance with national air quality standards and best practice. Policy C6 relating to the Proposed Scheme requires the proposal to minimise adverse impacts on the environment and manage the construction to minimise the impact on the environment and expects the implementation of the Proposed Scheme to minimise the impact on communities and the environment. The current South Northamptonshire Local Plan<sup>5</sup> initially developed in 1997 also makes general reference to the requirement for development to be sustainable.
- 2.1.4 In addition, local and regional guidance relevant to this assessment includes the South Northamptonshire District Council Air Quality Action Plan 2008<sup>6</sup>.

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<sup>1</sup> East Midland Regional Assembly, (2008), *East Midland Regional Plan 2008*.

<sup>2</sup> Cherwell District Council, (2011), *Cherwell Non-Statutory Local Plan 2011*.

<sup>3</sup> Aylesbury Vale District Council, (2004), *Aylesbury Vale District Local Plan 2004*.

<sup>4</sup> West Northamptonshire Joint Planning Unit, (2011), *West Northamptonshire Joint Core Strategy 2011*.

<sup>5</sup> South Northamptonshire District Council, (2007), *Local Plan Saved Policies 2007*.

<sup>6</sup> South Northamptonshire Council, (2008), *Air Quality Action Plan 2008*.

## 3 Baseline air quality data

### 3.1 Existing air quality

#### Local authority review and assessment information

- 3.1.1 South Northamptonshire Council has declared an air quality management area (AQMA) in central Towcester for exceedances of the annual mean nitrogen dioxide (NO<sub>2</sub>) standard. The AQMA is outside the study area.
- 3.1.2 Cherwell District Council has declared an AQMA on Hennef Way, Banbury, between the junction with Ermont Way and Concorde Avenue for exceedances of the annual and 1-hour mean NO<sub>2</sub> standard. The AQMA is located outside the study area.
- 3.1.3 As part of its review and assessment process, Aylesbury Vale District Council has declared an AQMA for exceedances of the annual mean NO<sub>2</sub> standard at three areas within the town of Aylesbury. These areas are outside the study area.
- 3.1.4 Although all three local authorities carry out monitoring within their districts, no monitoring is currently carried out in close proximity to the route or in the areas identified as being a potential area of concern.
- 3.1.5 Local authority review and assessment information indicates that baseline concentrations of NO<sub>2</sub> and particulate matter as PM<sub>10</sub> and PM<sub>2.5</sub> in the study area are likely to be in compliance with air quality standards given low background concentrations across the district, although higher concentrations will occur in built-up areas.

#### Local air quality monitoring data

- 3.1.6 Air quality standards are as follows:
  - 40µg/m<sup>3</sup> as an annual mean for NO<sub>2</sub> and PM<sub>10</sub>;
  - 200µg/m<sup>3</sup> one-hour mean for NO<sub>2</sub> not to be exceeded more than 18 times a year (equivalent to the 99.8<sup>th</sup> percentile of the one-hour mean);
  - 50µg/m<sup>3</sup> 24-hour mean for PM<sub>10</sub> not to be exceeded more than 35 times a year (equivalent to the 90.4<sup>th</sup> percentile of the 24-hour mean); and
  - 25µg/m<sup>3</sup> as an annual mean for PM<sub>2.5</sub>.
- 3.1.7 There are no monitoring locations within the study area that are relevant to this assessment.

#### Background pollutant concentrations

- 3.1.8 Estimates of background air quality have been taken from Department for Environment, Food and Rural Affairs (Defra) maps<sup>7</sup>. Background NO<sub>2</sub> concentrations

<sup>7</sup> Defra; Background Pollutant Concentration Maps; <http://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html>; Accessed: 2012.

are within air quality standards throughout the study area, with annual mean concentrations in the range  $9.9\mu\text{g}/\text{m}^3$ - $14.4\mu\text{g}/\text{m}^3$  in 2012. Background  $\text{PM}_{10}$  concentrations are within air quality standards throughout the study area, with annual mean concentrations in the range  $15.5\mu\text{g}/\text{m}^3$ - $17.2\mu\text{g}/\text{m}^3$  in 2012.

### Local emission sources

- 3.1.9 The main source of pollution in the area is road traffic. Major roads include the A421 London Road, A422 Brackley Road, and the A43, north of M40 J10, between A421 and A422, and between the A422 south-west of Brackley and A422 east of Brackley.

## 3.2 Receptors

### Human

#### *Construction phase*

- 3.2.1 Potential receptors are primarily those residential properties close to construction activity and alongside roads where traffic flows will change as a consequence of construction activity. Notable receptors in relation to construction activity include properties at Tibbets Farm, Sundale, Turweston Glebe, Hall Farm, The Oaks Farm and an unnamed property on the A421. Notable receptors near roads where traffic flows will change include Greenfinches, Mixbury Lodge, The Cottages and Barley Mow Farm. Receptors at greatest risk of dust effects are indicated in Map AQ-02-014-01 (Volume 5, Air Quality Map Book).

#### *Operational phase*

- 3.2.2 Once operational, only receptors located on roads where there will be possible changes in operational traffic or where the road alignment will have changed have the potential to be affected. Following review of the traffic data, the notable receptors identified include Station House, Manor Farm and Sundale.

### Ecological

#### *Construction phase*

- 3.2.3 The Helmdon Disused Railway Site of Special Scientific Interest (SSSI) has been considered for the construction dust assessment.

#### *Operational phase*

- 3.2.4 No ecological receptors in the area are predicted to be affected by air quality as a result of the operational phase.



## 4 Dust impact evaluation and risk rating

- 4.1.1 The following sections provide details of the assessment of construction impacts following the Institute of Air Quality Management (IAQM) guidance<sup>8</sup>. Where considered useful to identify receptors and their relationship to the construction activity, a specific figure is provided. On-site haul movements were assessed explicitly.
- 4.1.2 The dust assessment criteria for the haul route are based on those for earthworks, as set out in the IAQM guidance. This emission phase was considered to be the most applicable, as the assessment of impacts from earthworks will depend, in part, on the passage of vehicles over open surfaces. It was assumed that significant effects would not occur beyond a distance of 50m from the haul route, again based on interpretation of the earthworks criteria, and that all areas of the haul route will be subject to more than 10 vehicle movements per day. On the basis of criteria for earthworks within the IAQM guidance, the dust emission class for the haul route is large. Wherever there are receptors within 50m of a haul route, the sensitivity of the receiving environment was derived using the IAQM guidance. The need for, and capability of, the local environmental management plan (LEMP) to control these dust emissions, as directed by the draft Code of Construction Practice<sup>9</sup> (CoCP), was then considered in forming the conclusion of the assessment.

Table 1: Evaluation and risk rating of construction activities

| Activity   | Distance to nearest receptor | Dust emission class | Dust risk category | Sensitivity of surrounding area | Magnitude of impact | Principal justifications   |
|--|------------------------------|---------------------|--------------------|---------------------------------|---------------------|--|
| <b>Cuttings and embankments - A4421, The Oaks Farm, Tibbets Farm, Turweston Glebe and Hall Farm (Map AQ-02-014-01, Figure 14.1, 14.2, 14.3 and 14.4, Map AQ-02-014-02, Figure 14.6 (Volume 5, Air Quality Map Book))</b> |                              |                     |                    |                                 |                     |  |
| Demolition   | Less than 20m                | Medium              | High               | Medium                          | Negligible          | 1. Potentially dusty construction material.<br>2. Fewer than 10 receptors within 20m of demolitions. |
| Earthworks   | 20-50m                       | Large               | High               | Low                             | Negligible          | 1. Total site area greater than 10,000m <sup>2</sup> .   |

<sup>8</sup> Institute of Air Quality Management, (IAQM), (2011), *Guidance on the assessment of the impacts of construction on air quality and the determination of their significance*.

<sup>9</sup> Volume 5: Appendix CT-003-000.

| Activity  | Distance to nearest receptor | Dust emission class | Dust risk category | Sensitivity of surrounding area | Magnitude of impact | Principal justifications   |
|---|------------------------------|---------------------|--------------------|---------------------------------|---------------------|--|
|   |                              |                     |                    |                                 |                     | 2. No receptors within 20m of the site.  |
| Construction  | 20-50m                       | Large               | High               | Low                             | Negligible          | 1. Use of dusty construction materials.<br>2. No receptors within 20m of the site.   |
| Trackout  | Less than 20m                | Small               | Medium             | High                            | Negligible          | 1. Fewer than 25 heavy goods vehicle (HGV) trips in any one day.<br>2. 10 - 100 receptors within 20m of the roadside.                    |
| Haul route  | Less than 50m                | Large               | High               | Medium                          | Negligible          | 1. More than 10 HGV movements per day.<br>2. Fewer than 10 receptors within 50m of haul route.   |
| <b>Cuttings and embankments - The Helmdon disused railway SSSI (Map AQ-02-014-02, Figure 14.6 (Volume 5, Air Quality Map Book))</b> |                              |                     |                    |                                 |                     |  |
| Demolition  | N/A                          | N/A                 | N/A                | N/A                             | N/A                 | 1. No demolitions within 100m of the site.   |
| Earthworks  | Less than 20m                | Large               | Medium             | High                            | Negligible          | 1. Total site area greater than 10,000m <sup>2</sup> .<br>2. The Helmdon Disused Railway SSSI is less than 20m from proposed earthworks. |
| Construction  | Less than 20m                | Large               | Medium             | High                            | Negligible          | 1. Use of dusty construction materials.<br>2. The Helmdon Disused Railway SSSI is less than  |

| Activity   | Distance to nearest receptor | Dust emission class | Dust risk category | Sensitivity of surrounding area | Magnitude of impact | Principal justifications   |
|--|------------------------------|---------------------|--------------------|---------------------------------|---------------------|--|
|  |                              |                     |                    |                                 |                     | 20m from the site.   |
| Trackout   | N/A                          | N/A                 | N/A                | N/A                             | N/A                 | 1. No trackout within 100m of the SSSI.  |
| Haul route   | Less than 50m                | Large               | Medium             | High                            | Negligible          | 1. More than 10 HGV movements per day.<br>2. The Helmdon Disused Railway SSSI is less than 50m from the proposed haul route.   |
| <b>The Westbury and Turweston viaduct - properties in Turweston (Map AQ-02-014-01, Figure 14.4 (Volume 5, Air Quality Map Book))</b> |                              |                     |                    |                                 |                     |  |
| Demolition   | N/A                          | N/A                 | N/A                | N/A                             | N/A                 | No demolitions are required.   |
| Earthworks   | 200-350m                     | Large               | Low                | Low                             | Negligible          | 1. Total site area greater than 10,000m <sup>2</sup> .<br>2. No receptors within 20m.  |
| Construction   | 200-350m                     | Large               | Low                | Low                             | Negligible          | 1. Use of dusty construction materials.<br>2. No receptors within 20m.   |
| Trackout   | Less than 20m                | Large               | High               | Medium                          | Negligible          | 1. More than 100 HGV trips per day.<br>2. Fewer than 10 receptors within 20m of the roadside within 500m of the site entrance. |
| Haul route   | N/A                          | N/A                 | N/A                | N/A                             | N/A                 | 1. No receptors within 50m of the haul route.  |

| Activity   | Distance to nearest receptor | Dust emission class | Dust risk category | Sensitivity of surrounding area | Magnitude of impact | Principal justifications   |
|--|------------------------------|---------------------|--------------------|---------------------------------|---------------------|--|
| <b>The A43 Northampton Road over-bridge - Sundale (Map AQ-02-014-02, Figure 14.5 (Volume 5, Air Quality Map Book))</b> |                              |                     |                    |                                 |                     |  |
| Demolition   | 100-200m                     | Medium              | Low                | Low                             | Negligible          | 1. Potentially dusty construction material.<br>2. No receptors within 20m of the site.           |
| Earthworks   | Less than 20m                | Large               | High               | Medium                          | Negligible          | 1. Total site area greater than 10,000m <sup>2</sup> .<br>2. Fewer than 10 receptors within 20m. |
| Construction   | Less than 20m                | Large               | High               | Medium                          | Negligible          | 1. Use of dusty construction materials.<br>2. Fewer than 10 receptors within 20m.                |
| Trackout   | Less than 20m                | Large               | High               | Medium                          | Negligible          | 1. More than 100 HGV trips per day.<br>2. Fewer than 10 receptors within 20m of the roadside.    |
| Haul route   | Less than 50m                | Large               | High               | Medium                          | Negligible          | 1. More than 10 HGV movements per day.<br>2. Fewer than 10 receptors within 50m of haul route.   |

Table 2: Summary of construction dust impacts and effects

| Location                              | Magnitude of impact | Effect of dust-generating activities | Additional mitigation |
|---------------------------------------|---------------------|--------------------------------------|-----------------------|
| Series of cuttings and embankments    | Negligible          | Not significant                      | None required         |
| The Westbury and Turweston viaduct    | Negligible          | Not significant                      | None required         |
| The A43 Northampton Road over-bridge. | Negligible          | Not significant                      | None required         |

## 5 Air quality assessment - road traffic

### 5.1 Overall assessment approach

- 5.1.1 The air quality assessment for road-related emissions has considered the use of three different approaches based on the scale of changes in traffic and road alignment. Where the Design Manual for Roads and Bridges<sup>10</sup> (DMRB) thresholds detailed in the Scope and Methodology Report (SMR) (Volume 5: Appendix CT-001-000/1) are not exceeded, no additional assessment is required as the air quality impacts will be minimal. If these thresholds are breached then a quantitative assessment has been carried out.
- 5.1.2 In this study area the DMRB screening method was considered to be a suitable tool for the assessment.

### 5.2 Construction traffic model

- 5.2.1 Roads assessed for construction traffic are detailed in Volume 5: Appendix TR-001-000. Scenarios assessed were based on maximum traffic on affected roads during the construction phase of the Proposed Scheme.

#### Receptors assessed

- 5.2.2 For all road links where DMRB criteria for assessment of local air quality impacts were met, a number of receptors representative of worst-case exposure locations were selected for assessment. These included locations representative of highest pollutant concentrations along the roads including closest to junctions or to the road itself. Receptors assessed are presented in Map AQ-01-014 (Volume 5, Air Quality Map Book).

Table 3: Modelled receptors (construction phase)

| Receptor | Description/location                          | Ordnance Survey coordinates |
|----------|---|-----------------------------|
| 14-1     | Greenfinches (A422 Brackley Road)             | 462100, 236046              |
| 14-2     | Mixbury Lodge (A421 (London Road))            | 461286, 233175              |
| 14-3     | The Cottages (A43 (North of M40 J10))         | 454780, 228961              |
| 14-4     | Barley Mow Farm (A43 (between A421 and A422)) | 457616, 233466              |
| 14-5     | Station House (near haul route)               | 462887, 231222              |
| 14-6     | Field Farm House (near haul route)            | 460754, 237891              |

<sup>10</sup> Highways Agency, (2007), *The Design Manual for Roads and Bridges (Volume 11, Section 3, Part 1 Air Quality HA207/07.)*

## Background concentrations

5.2.3 The background concentrations used in the assessment are shown in Table 4 taken from the Defra maps.

Table 4: Background 2017 concentrations at assessed receptors

| Receptor (or zone of receptors)         | Concentrations ( $\mu\text{g}/\text{m}^3$ ) |                 |                  |
|---|---|-----------------|------------------|
|   | NO <sub>x</sub>                             | NO <sub>2</sub> | PM <sub>10</sub> |
| 14-1 Greenfinches                       | 12.0  | 8.8             | 15.6             |
| 14-2 Mixbury Lodge                      | 11.7  | 8.6             | 15.5             |
| 14-3 The Cottages                       | 22.1  | 15.4            | 17.4             |
| 14-4 Barley Mow Farm                    | 14.3  | 10.3            | 18.5             |
| 14-5 Station House (near route haul)    | 11.0  | 8.1             | 14.8             |
| 14-6 Field Farm House (near route haul) | 13.3  | 9.6             | 14.8             |

## Design Manual for Roads and Bridges model results

5.2.4 This section provides the summary of the modelled pollutant concentrations for the receptors assessed using the DMRB methodology. The magnitude of change and impact descriptor are also derived following the Environmental Protection UK (EPUK) methodology<sup>11</sup>.

Table 5: Summary of DMRB annual mean NO<sub>2</sub> results (construction phase)

| Receptor | Concentrations (µg/m <sup>3</sup> ) |                              |                           | Change in concentrations (µg/m <sup>3</sup> ) | Magnitude of change | Impact descriptor |
|----------|-------------------------------------|------------------------------|---------------------------|---|---------------------|-------------------|
|          | 2012 baseline                       | 2017 without Proposed Scheme | 2017 with Proposed Scheme |   |                     |                   |
| 14-1     | 12.2                                | 10.8                         | 15.0                      | 4.2   | Large increase      | Slight adverse    |
| 14-2     | 14.8                                | 13.4                         | 16.2                      | 2.7   | Medium increase     | Negligible        |
| 14-3     | 23.7                                | 18.8                         | 19.3                      | 0.5   | Small increase      | Negligible        |
| 14-4     | 17.4                                | 14.8                         | 15.5                      | 0.7   | Small increase      | Negligible        |
| 14-5     | 9.9                                 | 8.1                          | 8.5                       | 0.4   | Small increase      | Negligible        |
| 14-6     | 11.9                                | 10.5                         | 10.3                      | 0.7   | Small increase      | Negligible        |

Table 6: Summary of DMRB annual mean PM<sub>10</sub> results (construction phase)

| Receptor | Concentrations (µg/m <sup>3</sup> ) |                              |                           | Change in concentrations (µg/m <sup>3</sup> ) | Magnitude of change    | Impact descriptor |
|----------|-------------------------------------|------------------------------|---------------------------|---|------------------------|-------------------|
|          | 2012 baseline                       | 2017 without Proposed Scheme | 2017 with Proposed Scheme |   |                        |                   |
| 14-1     | 16.6                                | 16.0                         | 16.4                      | 0.4   | Small increase         | Negligible        |
| 14-2     | 17.2                                | 16.5                         | 16.8                      | 0.3   | Imperceptible increase | Negligible        |
| 14-3     | 18.9                                | 17.9                         | 17.9                      | <0.1  | Imperceptible increase | Negligible        |

<sup>11</sup> Environmental Protection UK (EPUK), (2010), *Development Control: Planning for Air Quality*.



| Receptor | Concentrations ( $\mu\text{g}/\text{m}^3$ ) |                              |                           | Change in concentrations ( $\mu\text{g}/\text{m}^3$ ) | Magnitude of change    | Impact descriptor |
|----------|---|------------------------------|---------------------------|---|------------------------|-------------------|
|          | 2012 baseline                               | 2017 without Proposed Scheme | 2017 with Proposed Scheme |   |                        |                   |
| 14-4     | 20.0  | 19.2                         | 19.3                      | <0.1  | Imperceptible increase | Negligible        |
| 14-5     | 15.5  | 14.8                         | 14.8                      | <0.1  | Imperceptible increase | Negligible        |
| 14-6     | 15.6  | 14.8                         | 14.9                      | 0.1   | Imperceptible increase | Negligible        |

## Assessment of significance

- 5.2.5 Pollutant concentrations will remain well within air quality standards with and without the Proposed Scheme. AQMAs lie outside the study area. The overall magnitude of impact of the Proposed Scheme is slight adverse at worst for NO<sub>2</sub> and negligible for PM<sub>10</sub> during construction.
- 5.2.6 The changes in air quality at worst-case receptors during the construction phase will not cause significant effects since adverse impacts are negligible or slight, taking into account background air quality and air quality standards.

## 5.3 Operational traffic model

- 5.3.1 Operational traffic data on which this assessment is based are detailed in Volume 5: Appendix TR-001-000. Scenarios assessed were based on maximum traffic on affected roads during the operational phase of the Proposed Scheme.

### Receptors assessed

- 5.3.2 For all road links where DMRB criteria for assessment of local air quality impacts were met, a number of receptors representative of worst-case exposure locations were selected for assessment. These included locations representative of highest pollutant concentrations along the roads, including closest to junctions or to the road itself. Receptors assessed are presented in Map AQ-01-09 (Volume 5, Air Quality Map Book).

Table 7: Modelled receptors (operational phase)

| Receptor | Description/location   | Ordnance Survey coordinates |
|----------|--|-----------------------------|
| 14-7     | Station Cottages/Station House; assessed due to realignment of A4421 Buckingham Road (south of Barton Hartshorn) | 462877, 231227              |
| 14-8     | Sundale; assessed due to realignment of A43 Oxford Road (north of Northampton Road)                              | 459638, 238967              |
| 14-9     | Manor Farm; assessed due to realignment of Radstone Road.  | 458701, 240575              |

## Background concentrations

- 5.3.3 The background concentrations used in the assessment are shown in Table 8 taken from the Defra maps.

Table 8: Background 2026 concentrations at assessed receptors

| Receptor (or zone of receptors)     | Concentrations (µg/m <sup>3</sup> ) |                 |                  |
|-------------------------------------|-------------------------------------|-----------------|------------------|
|                                     | NO <sub>x</sub>                     | NO <sub>2</sub> | PM <sub>10</sub> |
| 14-7 Station Cottages/Station House | 8.5                                 | 6.4             | 14.1             |
| 14-8 Sundale                        | 12.0                                | 8.8             | 15.6             |

| Receptor (or zone of receptors) | Concentrations ( $\mu\text{g}/\text{m}^3$ ) |                 |                  |
|---------------------------------|---|-----------------|------------------|
|                                 | NO <sub>x</sub>                             | NO <sub>2</sub> | PM <sub>10</sub> |
| 14-9 Manor Farm                 | 8.8   | 6.6             | 14.9             |

## Design Manual for Roads and Bridges model results

5.3.4 This section provides the summary of the modelled pollutant concentrations for the assessed receptors using the DMRB methodology. The magnitude of change and impact descriptor are also derived following the EPUK methodology<sup>11</sup>.

Table 9: Summary of DMRB annual mean NO<sub>2</sub> results (operational phase)

| Receptor | Concentrations (µg/m <sup>3</sup> ) |                           | Change in concentrations (µg/m <sup>3</sup> ) | Magnitude of change    | Impact descriptor |
|----------|-------------------------------------|---------------------------|---|------------------------|-------------------|
|          | 2026 without Proposed Scheme        | 2026 with Proposed Scheme |   |                        |                   |
| 14-7     | 10.5                                | 7.5                       | -3.0  | Medium decrease        | Negligible        |
| 14-8     | 15.3                                | 16.2                      | 0.9   | Small increase         | Negligible        |
| 14-9     | 6.8                                 | 6.8                       | >-0.1   | Imperceptible decrease | Negligible        |

Table 10: Summary of DMRB annual mean PM<sub>10</sub> results (operational phase)

| Receptor | Concentrations (µg/m <sup>3</sup> ) |                           | Change in concentrations (µg/m <sup>3</sup> ) | Magnitude of change    | Impact descriptor |
|----------|-------------------------------------|---------------------------|---|------------------------|-------------------|
|          | 2026 without Proposed Scheme        | 2026 with Proposed Scheme |   |                        |                   |
| 14-7     | 15.0                                | 14.4                      | -0.6  | Small decrease         | Negligible        |
| 14-8     | 17.1                                | 17.3                      | 0.2   | Imperceptible increase | Negligible        |
| 14-9     | 14.9                                | 14.9                      | >-0.1   | Imperceptible decrease | Negligible        |

### Assessment of significance

- 5.3.5 The impact is negligible for both NO<sub>2</sub> and PM<sub>10</sub> at all receptors assessed during the operational phase of the Proposed Scheme. In some instances, air quality is predicted to improve as a result of the proposed road realignments directing traffic further away from the receptor. Pollutant concentrations will remain within air quality standards with and without the Proposed Scheme. AQMAs lie outside the study area.
- 5.3.6 The changes in air quality at the most affected receptors during the operation phase will not cause significant effects since the adverse impact is negligible at worst, taking into account background air quality and air quality standards.

## 6 References

AEA Technology, (2009), *Air Quality Updating and Screening Assessment for Cherwell District Council*.

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